

## **VAPORIZATION AND IONIZATION OF METALS FOR USE IN SEMICONDUCTOR PROCESSING**

### **ABSTRACT OF THE DISCLOSURE**

Techniques for vaporizing and handling a vaporized metallic element or metallic element salt with a heated inert carrier gas for further processing. The vaporized metallic element or salt is carried by an inert carrier gas heated to the same temperature as the vaporizing temperature to a heated processing chamber. The metal or salt vapor may be ionized (and implanted) or deposited on substrates. Apparatus for accomplishing these techniques, which include carrier gas heating chambers and heated processing chambers are also provided.